

U.S. Department of Homeland Security

The Role of the Homeland Security Advanced Research Projects Agency

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A presentation for
NIST

Advanced Technology Program
Advisory Committee



DHS Metrics for Success

- **Protect the United States**
 - Lives of our citizens
 - Critical infrastructure
- **Protect the economic welfare of the United States**
 - Protect from destruction
 - Not cause economic harm to ourselves
 - Industry role is to create economic success;
not a Government role
- **Preserve quality of life**

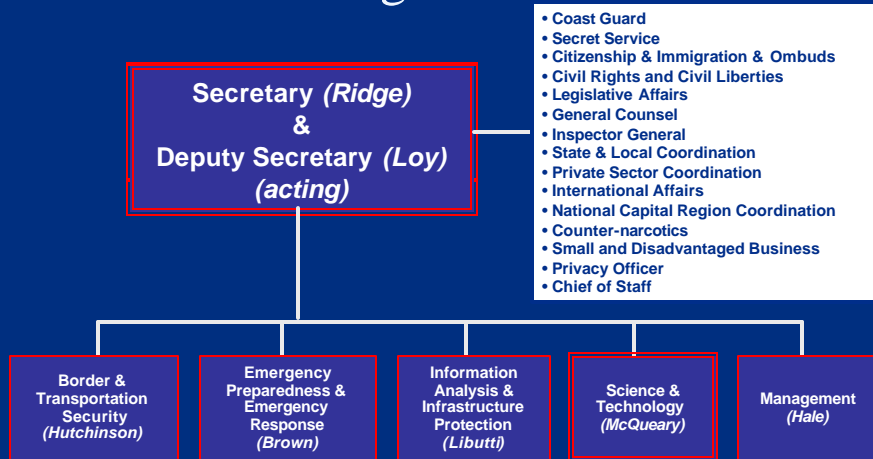


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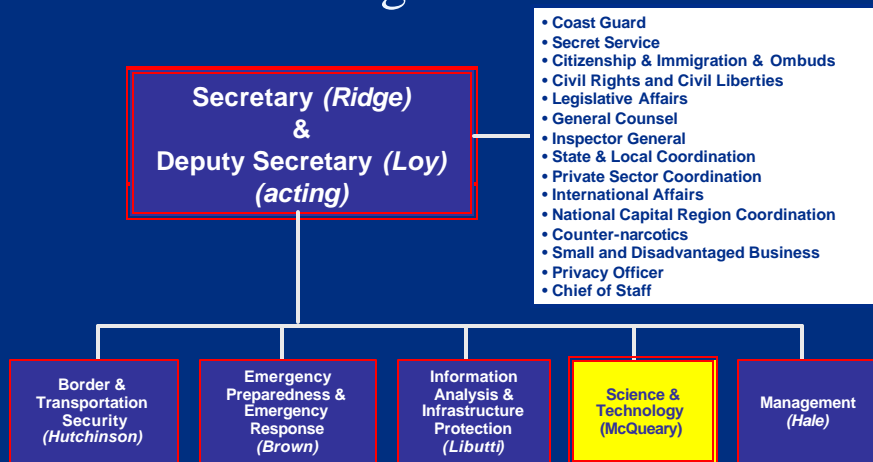
General DHS Organization Structure



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General DHS Organization Structure



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Science and Technology (S&T) Directorate Mission

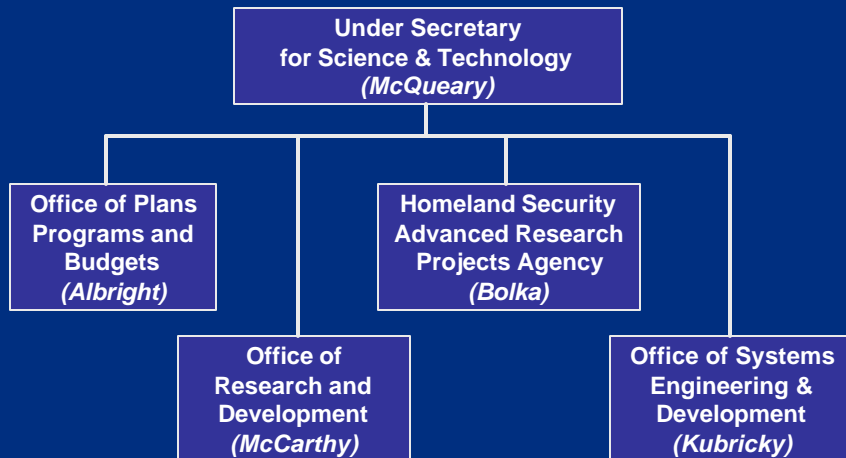
**Conduct, stimulate, and enable
research, development, test,
evaluation and timely transition
of homeland security capabilities
to federal, state and local
operational end-users.**



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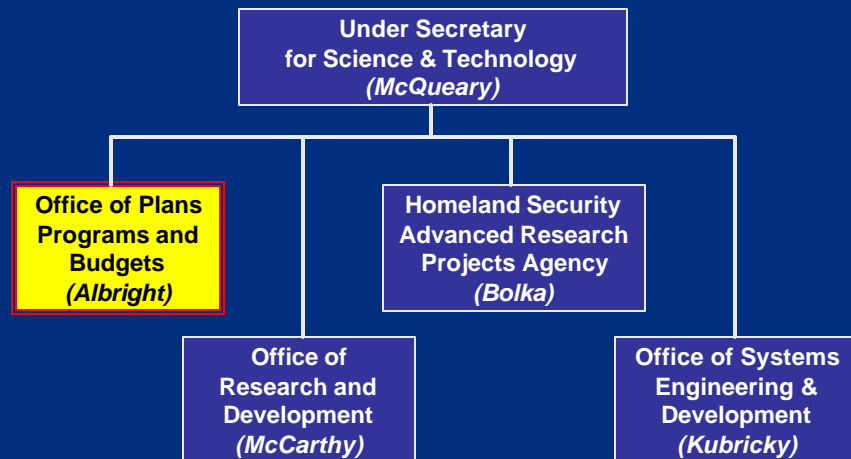
S & T Organization Chart



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S & T Organization Chart



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Crosscutting Portfolio Areas

- Biological
- Radiological & Nuclear
- Chemical
- High explosives
- Cyber defense
- Threat Vulnerability & Threat Analysis



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Customer Specific Portfolios

- **Critical Infrastructure Protection**
- **Borders & Transportation Security**
- **Emergency Preparedness and Response**
- **US Coast Guard**
- **US Secret Service**
- **State & Local Responders**



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Technology Strategy

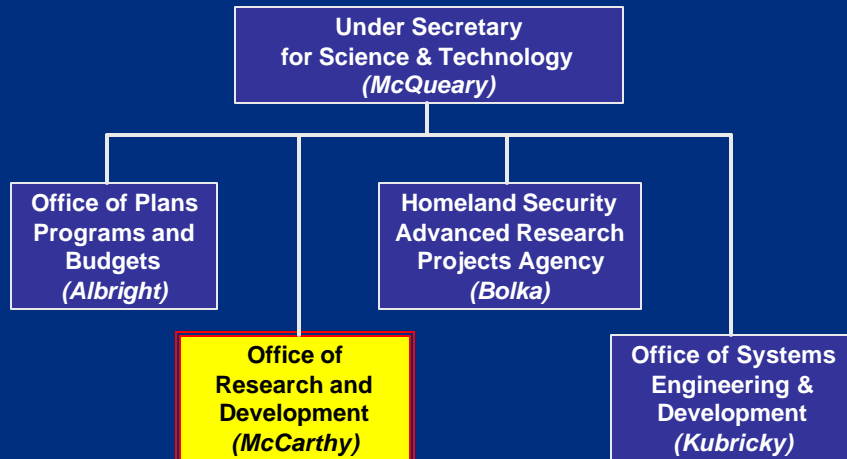
- **DOD –**
 - **“Train as you fight...fight as you train”**
- **DHS –**
 - **Deal with emergency using strengths built to handle everyday missions**



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S & T Organization Chart



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ORD Goals

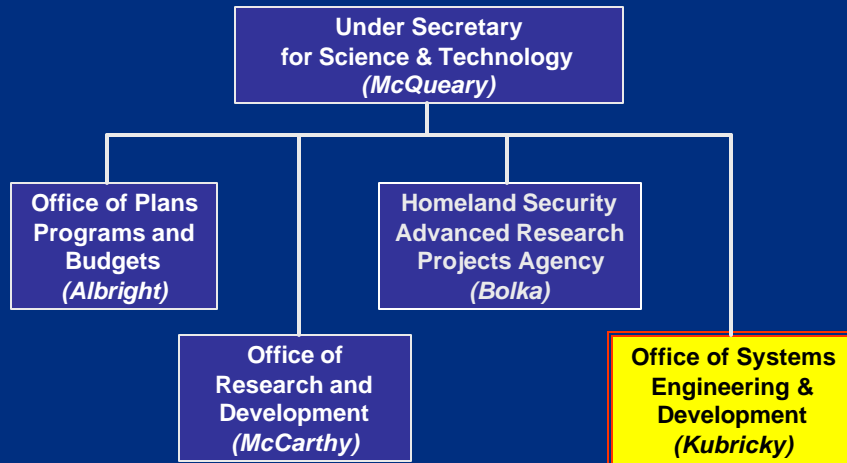
- **Deliver science and technology solutions to meet homeland security mission requirements.**
- **Create an enduring homeland security science and technology complex.**
- **Strengthen U.S. leadership in science and technology.**



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S & T Organization Chart



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DHS systems needs differ from DoD and other agency systems needs

- **Affordability is a performance characteristic;**
 - *“If it’s not affordable...zero performance”*
- **“Zero” false positives at system level**
- **System matches regional needs**
 - *Tailored to existing vulnerabilities, governments, methods of operations and legacy systems*
- **Cannot mandate Federal solutions**



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SE&D Goals

- **Develop systems context for solutions**
- **Conduct rapid full-scale development**
- **Conduct acceptance testing**
- **Transition to production & deployment**



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SE&D Portfolios

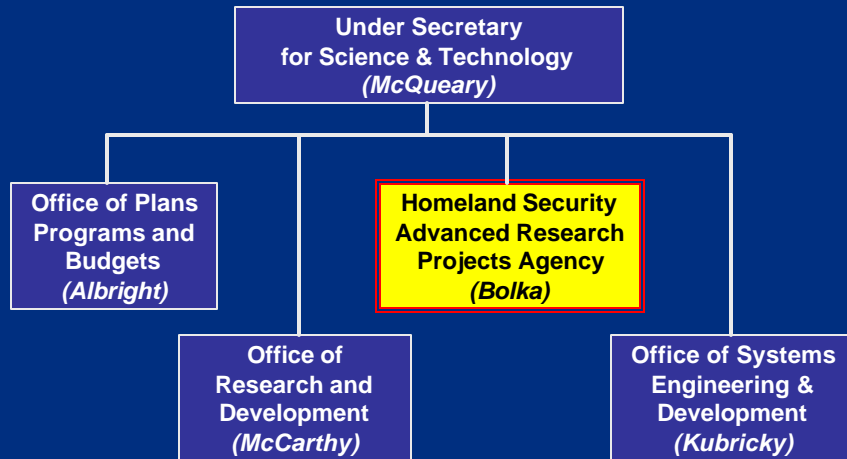
- *Counter* - MANPADS
- SAFECOM
- Biowatch
- Port of New York/New Jersey Testbed



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HSARPA Mission

- Satisfy operational needs
- Conduct rapid prototyping and commercial adaptation
- Research revolutionary options



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Legacy of HSARPA name

How is it different from DARPA?

- **Differences –**
 - **90-95% of funds for identified DHS requirements**
 - **5-10% of funds for revolutionary research for breakthroughs, new technologies and systems**



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Legacy of HSARPA name

How is it like DARPA?

- **Similarities –**
 - **Program Manager owns program**
 - **Active technical leadership of program**
 - **Full range of contracting vehicles**
 - **Common technology base with DoD**



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Program Managers

- GS-15 level term
 - IPA
 - Paid Detailees
 - § 1101 Special Government Hiring Authority
-

- Small and large businesses
- Academia
- Different Government: DoD, DoE, NIJ
- Near Term to “out-of the box” DARPA



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Solicitations

- HSARPA BAAs / RAs / etc.
 - White papers ? Full proposals
 - Technologies components, algorithms, data, test beds, prototype systems
- Small Business Innovative Research – FY 2004
(Presolicitation notice posted 29 September at www.eps.gov/spg)
- Website to register products for DHS purchase
- Technical Support Working Group (TSWG)
 - 6 to 24 months
 - Rapid prototyping
 - Commercial adaptation
 - Cooperative development
- For HSARPA research funding opportunities, monitor:
www.dhs.gov or www.bids.tswg.gov



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Contracting Vehicles

- Full range of options
 - Grants
 - Contracts
 - Cooperative agreements
 - Other Transactions for Research or Prototypes
 - Allows us to deal with non-traditional contractors who have desirable technologies, but do not want to keep “Government books”
 - Must comply with “generally acceptable accounting principles”



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S&T FY 2004 Funding (Amounts)

• Total for R&D	\$874.0 M
– Biological Countermeasures	198.5
– National Biodefense Center	88.0
– Radiation/Nuclear C/M	127.0
– Chemical C/M	52.0
– High Explosives C/M	9.5
– Threat Assessment, etc.	93.5
• Includes Cyber-Security - \$18M	
– Support to Components	34.0
– Rapid Prototyping	75.0
– Standards	39.0
– Emerging Threats	21.0
– Critical Infrastructure Protection	66.5
– University/Fellowship Programs	70.0



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